

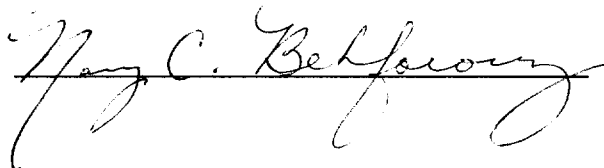
The Handbook for Students Contemplating a Career in Medicine:  
A Guide to Choosing a Medical Specialty

An Honors Thesis (Honors 499)

by

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A handwritten signature in cursive script, reading "Nancy C. Behforouz", written over a horizontal line.

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## **Table of Contents**

Abstract .....	i
Acknowledgments .....	ii
Author's Foreword .....	1
Part One .....	2
Introduction .....	2
Family Practice .....	5
Hematology/Oncology .....	7
Neurology .....	9
Orthopedic Surgery .....	10
Pediatrics .....	12
Psychiatry .....	14
Radiology .....	16
Part Two .....	18
Primary Care Specialties .....	18
Geriatrics .....	18
Internal Medicine .....	18
Sports Medicine .....	19
Primary Care Surgical Specialties .....	20
Obstetrics and Gynecology .....	20
Ophthalmology .....	20
Otolaryngology .....	21
Internal Medicine Specialties .....	22
Cardiology .....	22
Critical Care .....	22
Endocrinology .....	23
Gastroenterology .....	23
Infectious Disease Medicine .....	24
Nephrology .....	24
Pulmonary Medicine .....	25
Rheumatology .....	25
Surgical Specialties .....	26
Cardiovascular Surgery .....	26
Colon/Rectal Surgery .....	26
General Surgery .....	27
Neurosurgery .....	27
Plastic Surgery .....	28
Urology .....	28
Hospital Based Specialties .....	29
Anesthesiology .....	29
Emergency Medicine .....	29
Hospitalist .....	30

Preventive Medicine Specialties . . . . .	31
Aerospace Medicine . . . . .	31
Occupational and Environmental Medicine . . . . .	31
Tropical Medicine and Hygiene . . . . .	32
Miscellaneous Specialties . . . . .	33
Bariatrics . . . . .	33
Dermatology . . . . .	33
Pathology . . . . .	34
Physical Medicine and Rehabilitation . . . . .	34
Non-clinical Based Medical Specialties . . . . .	35
Clinical Decision Making/Medical Administration . . . . .	35
Clinical Pharmacology and Therapeutics . . . . .	35
Medical Informatics . . . . .	36
Part Three . . . . .	38
Other Factors to Consider When Choosing Medicine . . . . .	38
Other Good Sources of Information . . . . .	41
Table of Specialties . . . . .	42

## **Abstract**

This handbook first explores what traits are needed for a student considering medicine as a career, the typical schedule of a doctor, and how the residency matching process works. Next, it discusses in detail the specialties of family practice, hematology/oncology, neurology, orthopedic surgery, pediatrics, psychiatry, and radiology. It then looks briefly at many other fields of medicine. Finally, it ends with a discussion about benefits, balancing a family and career in medicine, and managed care.

## **Acknowledgments**

I would like to thank my advisor Dr. Nancy Behforouz for helping to keep this project focused and for all the good advice she gave me that helped me gain entrance into medical school. I also would like to thank all the physicians that took time out of their incredibly busy schedules to allow me to interview them. Finally, I would also like to thank my fiance Sean Kaiser for his help in developing the web page that accompanies this project.

## **Author's Foreword**

Although most people do not pick what field of medicine to enter until their third or fourth year of medical school, it can be advantageous to have an idea of what field you might be interested in and what field for which your personality is well suited. Often there are extra opportunities for medical students to gain experience in the fields they are interested in early in their careers such as during the summer of their first year of medical school. Also, during the third or fourth years of medical school, there is usually some time for elective rotations. Therefore, having an idea of the field of medicine you might want to pursue could be valuable in making good use of those rotations.

Maybe you are not convinced you want to be a doctor at all. My intention is that this handbook will serve as a tool for you to understand the different domains of medicine. Hopefully you can also determine what fields of medicine might suit your personality and learn about areas of medicine that you did not even realize existed, such as aerospace or tropical medicine.

This handbook, however, is not all-inclusive. A larger body of knowledge exists today than ever before as medical technology and research progress faster and faster. Every day more discoveries are made. Because of this growing knowledge, the number of specialties and subspecialties is also constantly growing. For instance, radiology used to just be a singular specialty in which physicians examined simple x-rays. Now, the technology for imaging and diagnosing medical problems has expanded into many radiology subspecialties such as neuroradiology and cardiothoracic radiology.

During the spring of 2000, I interviewed seven physicians in the Muncie area in what I would call vastly different fields. I will focus on some issues I discussed with them as a whole and then tell you a little about each of their fields. Following these explanations, I will discuss the other fields of medicine. In conclusion, I will address other issues to consider when contemplating a career in medicine such as additional benefits, balancing family life and a career, and the impact of managed care on the medical field.

## **Part One**

### **Introduction**

One question posed to all the doctors interviewed was what traits or characteristics they thought doctors in general should possess. Many of them said the same things. The characteristics they mentioned included: empathy, sympathy, compassion, patience, perseverance, knowledge of where to set limits, intelligence, the ability to communicate well and relate to all sorts of people, enjoyment of studying and continuing to learn new things, dedication, a certain kind of compulsiveness that ensures that everything is completed thoroughly, and possession of a genuine interest in people. One doctor said that students who do not like to listen to people complain or help solve their problems should not become doctors. Another doctor joked that the ability to function well on little sleep was also an added benefit.

In addition, the physicians were asked what their typical day, week and on call schedule was like. The specifics of what each doctor said are not that important since there was a good deal of variety in their answers. Some generalizations can be made based on their answers however. First, almost all doctors start their day at around 7:00 or 7:30 A.M. by completing rounds at the hospital, visiting all of their patients that are currently in-patients and usually finish their day sometime around 6:00 P.M. Second, being in a large practice or teaming up with physicians in other practices seems to be very beneficial in reducing the amount of time spent on call. The psychiatrist interviewed was in a practice with approximately ten other doctors. She only had to take call one weekend out of every six to eight weeks. Contrast this schedule with the pediatrician who opened a solo practice immediately following residency and was on call every single week night and weekend. She said it was very difficult, particularly as she had two small children.

All doctors must complete four years of medical school after finishing their undergraduate degree. Fourth year students go through a matching process to find a residency program to complete their graduate medical education. After deciding what field of medicine they want to

pursue, they apply and are invited to visit residency programs in their field of interest. They rank the residency programs that they visited in terms of their preference while the residency programs rank all of the candidates that they interviewed. The rest is left up to a computer system that helps match up medical students with the residency program they want. Some fields have few residency programs and are therefore very competitive to get into, whereas some fields, like family practice, have plenty of positions available. The students entering certain specialties have to go through an internship year for the first year of residency that encompasses all the different aspects of medicine. This year is similar to the rotations completed by medical students during their third and fourth years of medical school, but with more responsibility. After residency, which can range from three to six years, many doctors choose to take an additional fellowship that may last an additional one to three years. Fellowships usually give specialists additional training in a more specific part of their field. Residency and fellowship lengths will be discussed with each branch of medicine.

Each doctor interviewed was asked how stressful and how rewarding their job is on a scale from 1 to 10. Keep in mind though, that this is the opinion of one doctor in that field of medicine. The levels of stress were highly variable. How their practice is arranged, how they personally handle stress, and their patient load are some of the factors that may influence this number. The reward factor, however, was consistently high among all the physicians interviewed. They also all said, without hesitation, that if they had it to do all over again, they would still take the same difficult path that allowed them to become physicians. This commitment seems to demonstrate that medicine is a very rewarding field that is worth the stress it sometimes causes.

Seven physicians were interviewed, one in each of the fields of family practice, hematology/oncology, neurology, orthopedic surgery, pediatrics, psychiatry, and radiology. At the end of most of the following specialty sections there will be two salary figures. The first figure (A) will be the national average of first year starting salaries while the second figure (B) will be the average compensation for physicians that have been practicing medicine for at least three years. Both figures were obtained by a group called Physicians Search that surveyed 532 and over 3000



physicians respectively in 1998. (<[www.physicianssearch.com/physician/salary1.html](http://www.physicianssearch.com/physician/salary1.html)> and <[www.physicianssearch.com/physician/salary2.html](http://www.physicianssearch.com/physician/salary2.html)>) In addition, Dr. Kenneth V. Iserson's book Get Into Medical School! gives a rating for how difficult various residencies are to obtain as of 1997. They are rated by the following system: 1 means entry into a training program is very easy; 2 means entry is easy; 3 means entry is difficult; 4 means entry is very difficult; 5 means entry is extremely difficult.

## Family Practice

The term family practice has been officially defined by the American Academy of Family Physicians (AAFP) on their web page as,

. . . the medical specialty which provides continuing and comprehensive health care for the individual and family. It is the specialty in breadth which integrates the biological, clinical, and behavioral sciences. The scope of family practice encompasses all ages, both sexes, each organ system, and every disease entity.

The family practice doctor that was interviewed works in a private practice affiliated with twelve other family practice doctors through a tertiary care hospital. He said that family practice is a good field for students who cannot decide what they want to do, because family practice physicians get to do a little of everything. Some future physicians worry if they will be able to maintain a full scope of practice due to the amount of new knowledge that is being added every day. They are concerned that they will have to refer most of their patients to specialists instead of being able to handle their cases by themselves. Currently, the AAFP, however, claims that family practice physicians are able to exclusively manage 85 to 90 percent of their own cases.

Most family practice doctors enjoy their field because it is rewarding, challenging, diverse and flexible. The doctor that was interviewed enjoys the broad spectrum of problems that he sees and likes that he is able to focus on preventive medicine. He said the best thing about family practice is getting to know people very well as they come to see him over many years. The personal interactions and trust he receives from many patients make him feel like they are almost a part of his own family. He felt the worst part deals with the same concept. Sometimes having to see the same annoying person or hypochondriac repeatedly can become frustrating. Overall, however, the positive interactions far outweigh the negative ones.

The residency for family practice is three years. Time is spent training in both hospitals and clinics. The majority of doctors enter a group practice when they are finished with their residency.

Stress: 7 or 8

Reward: 8 or 9

Figure A: \$125,000

Figure B: \$142,516

Entrance factor: 2

For additional information, see:

American Academy of Family Physicians  
[www.aafp.org](http://www.aafp.org)

## Hematology/Oncology

Hematology and oncology are two separate specialties that are often practiced together. The doctor interviewed was trained in both of these specialties, as is common today. A hematologist deals with the diagnosis and treatment of diseases of the blood- either malignant, such as lymphoma or leukemia, or non-malignant, such as anemia. They also are trained in performing and reading bone marrow tests, and performing special separation of blood cells for patients who need drug therapy, radiation treatment, or chemotherapy. An oncologist deals primarily with the diagnosis and treatment of cancer through all phases of the disease. Within the specialty of oncology, there are three primary disciplines: medical oncologists who treat cancer with medicine and chemotherapy, surgical oncologists who focus on the surgical aspects including biopsies and tumor removals, and radiation oncologists who focus on treating cancer with therapeutic radiation. Pediatric oncology is also a separate discipline that incorporates the use of all three disciplines for children who have cancer.

The hematologist/oncologist that was interviewed works in an outpatient clinic and as a residency director at the nearby hospital. He said the best part of his job is that it is very rewarding. He has an opportunity to help each patient in a different way and knows that he has to set different goals for different patients. Sometimes his goal is to cure the cancer and sometimes the goal has to be to make that person more comfortable and pain free in their remaining time. He feels the worst part of his job is dealing with insurance companies and managed care. Especially in the field of cancer where there are constantly new drugs being produced, most insurance companies will not pay for treatments considered experimental or not yet tested in enough people to have conclusive evidence. The hematologist/oncologist is sometimes forced to assume the cost of the medicine since the patient would not be able to pay such a large amount.

The residency training for clinical oncology is between four and eight years in length depending on which discipline is chosen. The first years may be spent in internal medicine, surgery, radiology, or pediatrics. This time is then followed by three years in a hematology/oncology program. More specialized training is available in areas such as bone marrow transplants, breast cancer, lung cancer, or leukemia.

Stress: 2 or 3

Reward: 10

Figure A: \$150,000

Figure B: \$249,298

Entrance factor: 2

For additional information, see:

American Society of Clinical Oncology

[www.asco.org](http://www.asco.org)

American Society of Hematology

[www.hematology.org](http://www.hematology.org)

## Neurology

A neurologist is a doctor who deals with the diagnosis, management, and treatment of disorders of the brain and nervous system. They can recommend surgical treatment, but they do not perform surgery. With patients whose disorders require frequent care, such as Parkinson's disease, Alzheimer's disease, and multiple sclerosis, the neurologist often becomes their primary care physician. At other times, they perform the role of consultant for conditions such as stroke, concussions, or headaches, and work with the patient's primary care physician in developing a course of treatment. Neurology is an expanding field that still has an abundance of research that needs completed before scientists completely understand the brain and nervous system.

The neurologist that was interviewed works in a private practice with two other neurologists in a clinic devoted solely to the practice of neurological medicine. He enjoys the intellectual stimulation of keeping up with current research and developments, such as new medicines that are being developed. He is greatly rewarded when someone responds well to a new medicine or are even cured from their ailment. The worst part of the job is seeing sad cases like a small child with a serious problem or someone who has Lou Gehrig's disease (ALS) declining from good health to death in a short time.

Neurologists first complete an internship year in general medicine and then complete three years of residency in neurology. Many doctors elect to complete a one to two year fellowship in a subspecialty area such as electrophysiology, neurooncology, strokes, degenerative diseases, or movement disorders.

Stress: 4  
Reward: 6 or 7  
Figure A: \$130,000  
Figure B: \$186,653  
Entrance factor: 1

For additional information, see:

American Academy of Neurology  
[www.aan.com](http://www.aan.com)

## Orthopedic Surgery

The surgical specialty of orthopedics deals with the prevention, diagnosis, treatment, and rehabilitation of musculoskeletal injuries and diseases including problems with bones, joints, ligaments, tendons, muscles, and nerves. Treatment of these injuries may include the prescription of medication, physical therapy, or a surgical plan of treatment. The orthopedic surgeon that was interviewed works in an orthopedic clinic with twelve other orthopedic surgeons, a couple of sports medicine doctors, and a physiatrist. He is also a team physician for a university. When going through his rotations in medical school, he enjoyed the surgical specialties more than the internal medicine specialties because he could have a definitive impact on someone by changing things immediately. On the other hand, with non-surgical specialties, he felt that a physician deals more indirectly with managing patients' problems. Sometimes the patient has to be trusted to comply with the course of treatment, which often means the results are not as fast. For example, if he were to try a certain medication for a patient's injury, not only does the patient have to consistently take the medicine, but it also has to have time to work. One reason the interviewee picked orthopedic surgery over the other surgical specialties was because he enjoys working with a healthy population of people. Many patients that an orthopedic surgeon sees are fit people that were injured playing sports or exercising. Of course, older or obese patients who have joints that are wearing out and need replacement also often visit orthopedic physicians. Between the athletic population who gets injured, the obese population, and elderly people who are living longer, there is excellent job security. Beyond all the qualities that he thought all doctors should possess as noted above, he felt that surgeons should specifically be good with their hands and have some mechanical-mindedness in order to perform well.

The aspect the orthopedic surgeon currently enjoys most about his job is when he makes an impact on how his patients feel. When he walks into the room and patients smile and say they feel great, he feels great satisfaction in his job. In terms of surgery, the worst thing about his job would be if a patient happens to die during an elective surgical procedure from other medical

complications. As far as his work in the office though, the circumstance that frustrates him most is having patients that do not want to get well or are not being honest about what they are after (i.e., patients seeking narcotics).

The residency program for orthopedic surgery is a five year program. Many orthopedic surgeons end up specializing in one part of the body such as the shoulder, knee, or total joint replacements.

Stress: 7 or 8

Reward: 10

Figure A: \$180,000

Figure B: \$346,224

Entrance factor: 5

For additional information, see:

American Society of Orthopedic Surgeons  
[www.aaos.org](http://www.aaos.org)



## Pediatrics

Pediatricians are "kid doctors." They are involved in the prevention, diagnosis, and treatment of infections, injuries, chronic conditions, emotional and behavioral problems, and the assessment of psychosocial problems such as family violence or substance abuse. Pediatricians care for children from birth to age 21. Preventive health care is a large part of their job.

The pediatrician that was interviewed works in a practice within the outpatient ward of a tertiary care hospital with two other partners. She said it is obviously really important to like children and not mind working with sick ones. Also, being able to communicate extremely well with the parents is very important since sometimes that is the only way of finding out what is wrong with a young child. The interviewee cited many reasons for loving pediatrics. She is never bored because she never knows what situation she will walk into. With such a wide range of ages that have unique problems, there are always surprises. She also enjoys continuing to learn new things about the improving treatments and care that she can give her patients.

One of the negative aspects of pediatrics is seeing the children who have psychosocial problems - those who are being abused or are depressed because they feel like no one likes them. She said as much as she tries to isolate herself from these kinds of situations, they do start to take a personal toll on her. Another tough situation is watching such young children die. Even after 28 years of practice in pediatrics, she said it has not become much easier when a child passes away.

The residency for pediatrics is three years in length. Optional fellowships that are two to three years in length provide extra training in adolescent medicine, neonatology, neurology, behavioral pediatrics, developmental disabilities, emergency medicine, genetics, infectious disease, rheumatology and many others. Pediatricians, similar to other primary care physicians work approximately 50 hours a week according to a survey from the American Academy of Pediatrics in 1992. The same survey also found that about 13% of pediatricians were working part time (35 hours a week or less).

Stress: 9  
Reward: 10  
Figure A: \$110,000  
Figure B: \$143,754  
Entrance factor: 3

For additional information, see:

The American Academy of Pediatrics  
[www.aap.org](http://www.aap.org)

## Psychiatry

Psychiatry is the medical specialty that deals with the diagnosis and treatment of disorders of the mind. They utilize a mixture of psychotherapy, behavioral modifications, and pharmaceutical methods to help control disorders such as depression, panic disorder, and schizophrenia. The psychiatrist that was interviewed likes the stability of hours that her specialty offers. She sees patients in the morning at the mental health clinic where she works and then goes to a tertiary care hospital for consults in the afternoon. Because the hospital that she and her partners work out of has an emergency response team, it lightens the call load considerably.

The aspect of psychiatry she likes best is the spontaneity that the job offers. She mentioned that she never knows what her patients might reveal or what problems they are facing. She also really enjoys having the time to actually talk in depth with people, something that other specialties often lack. The field of psychiatry best suits someone who enjoys listening to other people's problems. She feels the worst thing about her field is when people are not taking care of themselves or say they want help, but are not really trying. She mentioned her frustration when she feels like she is not getting through to someone, especially if they have an addiction to alcohol or drugs that they are not willing to give up. Some traits that she thought psychiatrists in particular need are the willingness to look at oneself critically and the ability to examine issues in one's own life that may surface during patients' therapy sessions. Being a "hardy individual" and having the ability to leave your work at the office are also essential.

The residency starts with an internship year followed by three years of training in psychiatry. In order to work with children and adolescents, a two year child and adolescent fellowship after the three year residency for psychiatry or a combined five year residency for child and adolescent psychiatry can be completed. Other fellowships include addiction psychiatry, forensic psychiatry, and clinical neurophysiology.

Stress: 3 to 10

Reward: 9

Figure A: \$125,000

Figure B: \$142,610

Entrance factor: 1

For additional information, see:

American Psychiatric Association Online

[www.psych.org](http://www.psych.org)

American Academy of Child and Adolescent Psychiatry

[www.aacap.org](http://www.aacap.org)

## Radiology

Diagnostic radiology is the study of images of the human body. This field now uses many different technologies including plain radiography, CT scans, MRIs, ultrasound, and nuclear scans. Radiology is different from most other specialties in that they do not work directly with patients. Perhaps the people that go into radiology are the introverts who really like technology and the "behind the scenes" aspect of medicine. The radiologist that was interviewed works in a practice of about twenty general radiologists that rotate in a tertiary care hospital and radiology centers. He cited that radiology takes the people out of the picture and forces him to deal directly with the disease process. He sees the field as a little more scientific and objective than other fields that he considers to be more subjective. The radiologist also gets to explore the entire scope of medicine whereas many specialists deal with only one part of the body. Radiologists not only interpret results of diagnostic tests, but also send reports back to the referring doctor and recommend further testing. The radiologist that was interviewed felt that the best part of radiology is feeling like he makes a difference in the health care team. He is the one that often makes the call about what disease or condition a patient actually has. He also said that radiology is an interesting field that is quite complex. For him, the worst part of radiology is having to deal with insurance companies and managed care.

One might think that the ability to see well and having good spatial abilities would be crucial to being a radiologist. However, this doctor said he trained with one doctor who only had one eye and, therefore, had no depth perception, and another doctor who wore very thick glasses. Therefore, do not rule out radiology on the sole basis of having less than perfect vision. Concerning spatial ability, he said that it is definitely a skill that can be learned.

The residency for radiology is at least four years with one to two year fellowships available for training in many subspecialties. These subspecialties include breast imaging, cardiovascular, chest, computed tomography (CT), emergency radiology, gastrointestinal, genitourinary, head and neck, interventional, magnetic resonance imaging (MRI), musculoskeletal, neuroradiology, nuclear medicine, pediatric radiology, physicist, radiobiology, ultrasound, and radiation oncology.

Stress: 5

Reward: 7

Figure A: \$145,000

Figure B: \$286,361

Entrance factor: 1

For additional information, see:

The Radiological Society of North America, Inc.

[www.rsna.org](http://www.rsna.org)

Radiology Info

[www.radiologyinfo.org](http://www.radiologyinfo.org)

## **Part Two**

### **PRIMARY CARE SPECIALTIES**

#### **Geriatrics**

Geriatricians are the doctors who specialize in the comprehensive health care and treatment of older persons. These doctors are primary care physicians. They usually complete an internal medicine residency followed by a two to three year fellowship in geriatrics. Salary information is not available.

Entrance factor: 1

For additional information, see:

The American Geriatrics Society  
[www.americangeriatrics.org](http://www.americangeriatrics.org)

#### **Internal Medicine**

Internists are primary care physicians that treat acute and chronic problems of the adult population. Many doctors enter a residency in internal medicine so they can further specialize in one of the internal medicine fields. The residency for general internal medicine is three years in length.

Figure A: \$115,000

Figure B: \$148,206

Entrance factor: 2

For additional information, see:

Society of General Internal Medicine  
[www.sgim.org](http://www.sgim.org)  
American College of Physicians - American Society of Internal Medicine  
[www.asim.org](http://www.asim.org)

## Sports Medicine

Sports medicine physicians diagnose and treat acute and chronic injuries that athletes and other physically active individuals experience. These practitioners are sometimes team physicians and often work closely with an orthopedic physician even though the majority of musculoskeletal injuries can be dealt with in a nonsurgical manner. Sports medicine doctors first complete a residency program in family medicine, pediatrics, internal medicine or orthopedics. Then they complete a one to two year fellowship in sports medicine. Salary averages are not available.

Entrance factor: 2

For additional information, see:

American College of Sports Medicine

[www.acsm.org](http://www.acsm.org)

American Orthopedic Society for Sports Medicine

[www.aossm.org](http://www.aossm.org)

American College of Physicians - American Society of Internal Medicine

[www.asim.org](http://www.asim.org)



## **PRIMARY CARE SURGICAL SPECIALTIES**

### **Obstetrics and Gynecology**

Obstetricians deal with fertility and pregnancy while gynecologists deal with medical and surgical diseases and disorders of the female reproductive tract that do not deal with pregnancy. While physicians can practice just one of these specialties or the other, most practice both. The residency for both of them is four years in length. Additional training is available in fertility, gynecologic oncology, and maternal and fetal medicine.

Figure A: \$150,000

Figure B: \$238,224

Entrance factor: 4

For additional information, see:

American College of Obstetricians and Gynecologists  
[www.acog.org](http://www.acog.org)

### **Ophthalmology**

Ophthalmologists specialize in the diagnosis and treatment of diseases and abnormalities of the eye and the structures surrounding it. Residency starts with a general internship year and then is followed by three years of training specifically in ophthalmology. Subspecialty fellowships are available in cornea, glaucoma, neuro-ophthalmology, pediatric ophthalmology, and retina-vitreous.

Figure A: \$130,000

Figure B: \$246,823

Entrance factor: 3

For additional information, see:

American Academy of Ophthalmology  
[www.eyenet.org](http://www.eyenet.org)

## Otolaryngology

Otolaryngologists deal with the medical and surgical treatment of diseases and disorders of the ears, nose and throat and related structures of the head and neck. The residency lasts five years with the option of a one or two year fellowship in one of seven subspecialty areas: pediatric otolaryngology, otology/neurotology (ears, balance and tinnitus), allergy, facial plastic and reconstructive surgery, head and neck, laryngology (throat), and rhinology (nose).

Figure A: \$130,000

Figure B: \$254,978

Entrance factor: 5

For additional information, see:

American Academy of Otolaryngology - Head and Neck Surgery  
[www.entnet.org](http://www.entnet.org)

## **INTERNAL MEDICINE SPECIALTIES**

### **Cardiology**

A cardiologist is responsible for identification, treatment, and prevention of heart and blood vessel disease. They deal with problems such as heart murmurs, heart attacks, and heart failure.

A cardiologist studies internal medicine for three years and then an additional three or more years in cardiology.

Figure A: \$180,000

Figure B: \$283,298

Entrance factor: 2

For additional information, see:

American College of Cardiology  
[www.acc.org](http://www.acc.org)

### **Critical Care Medicine**

Critical care is the specialty dealing with all aspects of acute, life threatening illnesses or injuries. Most doctors in this specialty work in the intensive care unit but may also work other places. Critical care physicians are different from emergency room physicians in that they care for these patients on a long term basis. The residency for critical care doctors, or intensivists, includes completing residency in surgery, internal medicine, pediatrics or anesthesiology first and then receiving further training in critical care. According to SHR's Medquest Tablet at <[www.shrmedquest.com](http://www.shrmedquest.com)>, the 1999 median compensation for critical care physicians in the midwest is \$158,690.

Entrance factor: 2

For additional information, see:

Society of Critical Care Medicine  
[www.sccm.org](http://www.sccm.org)

## Endocrinology

Endocrinologists specialize in treating disorders that concern circulating and locally acting hormones. These doctors often treat problems such as infertility, metabolism, glandular cancers, birth control, short stature, heart disease, hormonal imbalances, diabetes, growth, and genetic dysfunction. Endocrinologists usually specialize in internal medicine, pediatrics, obstetrics, gynecology, or oncology. Then they complete further studies for one to three additional years in endocrinology.

Figure A: \$140,000

Figure B: \$160,085

Entrance factor: 1

For additional information, see:

The Endocrine Society  
[www.endo-society.org](http://www.endo-society.org)  
American Association of Clinical Endocrinologists  
[www.aace.org](http://www.aace.org)

## Gastroenterology

Gastroenterologists specialize in the diagnosis and treatment of ailments of the gastrointestinal tract, or digestive system. Most gastroenterologists first complete a three year residency in internal medicine and then receive an additional two to three years of training in gastrointestinal disorders.

Figure A: \$140,000

Figure B: \$250,574

Entrance factor: 2

For additional information, see:

American College of Gastroenterology  
[www.acg.gi.org](http://www.acg.gi.org)

### Infectious Disease Medicine

Infectious disease physicians deal with the prevention, diagnosis, and treatment of communicable diseases such as influenza, viruses, and malaria. These doctors often work to track down sources of infection during outbreaks, and consult with other physicians.

Residency consists of two years of an internal medicine residency followed by a two fellowship in infectious disease medicine. Salary information is not available.

Entrance factor: 1

For additional information, see:

Infectious Disease Society of America

[www.idsociety.org](http://www.idsociety.org)

American College of Physicians - American Society of Internal Medicine

[www.asim.org](http://www.asim.org)

### Nephrology

Nephrologists diagnose and non-surgically treat problems dealing with kidney disorders and diseases. An internal medicine residency must first be completed before starting a two year fellowship in nephrology.

Figure A: \$129,000

Figure B: \$233,824

Entrance factor: 1

For additional information, see:

American Society of Nephrology

[www.aasn-online.com](http://www.aasn-online.com)

American College of Physicians - American Society of Internal Medicine

[www.asim.org](http://www.asim.org)

### Pulmonary Medicine

A doctor in pulmonary medicine deals with the diagnosis and treatment of diseases of the respiratory system, including the lungs, bronchial tubes, nose, pharynx, larynx, and heart. After completing an internal medicine residency a two to three year fellowship must be completed in pulmonary medicine.

Figure A: \$110,000

Figure B: \$188,956

Entrance factor: 2

For additional information, see:

American College of Chest Physicians

[www.chestnet.org](http://www.chestnet.org)

American Thoracic Society

[www.thoracic.org](http://www.thoracic.org)

American College of Physicians - American Society of Internal Medicine

[www.asim.org](http://www.asim.org)

### Rheumatology

Rheumatologists deal with the diagnosis and treatment of arthritis, autoimmune diseases and other diseases of the joints, muscles, and bones. The residency is three years in internal medicine or pediatrics followed by two to three years in rheumatology training.

Figure A: \$110,000

Figure B: \$155,164

Entrance factor: 2

For additional information, see:

American College of Rheumatology

[www.rheumatology.org](http://www.rheumatology.org)

## **SURGICAL SPECIALTIES**

### **Cardiovascular Surgery**

The cardiovascular surgeon is responsible for performing operations on the heart, blood vessels, and lungs. They perform such things as coronary artery bypass, pacemaker insertions, valve replacements and heart transplants. They must first complete five years of a general surgery residency before entering a two to three year program for cardiothoracic surgical training.

Figure A: \$208,000

Figure B: \$558,719

Entrance factor: 5

For additional information, see:

American College of Cardiology  
[www.acc.org](http://www.acc.org)

### **Colon/Rectal Surgery**

A colon/rectal surgeon treats patients with diseases and disorders of the colon, rectum, and anus. The residency consists of five years of general surgery and then a one year fellowship in colon and rectal surgery.

Figure A: \$155,000

Figure B: \$264,000

Entrance factor: 4

For additional information, see:

The American Society of Colon and Rectal Surgeons  
[www.fascrs.org](http://www.fascrs.org)

## General Surgery

General surgeons usually diagnose and treat diseases and injuries to the abdominal organs and areas surrounding the neck and trunk. In rural areas, they might be performing a larger range of surgeries if surgical subspecialists are not in the area. The residency for general surgery is five years in length.

Figure A: \$150,000

Figure B: \$261,276

Entrance factor: 4

For additional information, see:

American College of Surgeons  
[www.facs.org](http://www.facs.org)

## Neurosurgery

Neurosurgery, or neurological surgery, provides operative and non-operative treatments for disorders of the brain, skull, pituitary gland, spinal cord, cranial and spinal nerves, and the autonomic nervous system. Residency lasts five years following one year of general surgery. There are seven subspecialties that require additional training: neurotrauma, critical care, cerebrovascular surgery, stereotactic and functional neurosurgery, disorders of the spine, peripheral nerves, and tumors.

Figure A: \$175,000

Figure B: \$438,426

Entrance factor: 5

For additional information, see:

Neurosurgery://On Call  
[www.aanns.org](http://www.aanns.org)



## Plastic Surgery

A plastic surgeon repairs, reconstructs, or replaces the physical defects of the skin, musculoskeletal system, craniomaxillofacial structures, hand, breast and trunk, extremities, and external genitalia. They perform two types of surgery - cosmetic surgery, which reshapes normal structures to improve the patient's appearance, or reconstructive surgery, which is performed on abnormal structures with the purpose of improving function or approximating a normal appearance. Three years of a general surgery residency must be completed first before entering a two to three year plastic surgery program.

Figure A: \$150,000

Figure B: \$266,047

Entrance factor: 3

For additional information, see:

Plastic Surgery Information Service  
[www.plasticsurgery.com](http://www.plasticsurgery.com)

## Urology

Urology is the surgical specialty that deals with disorders and diseases of the male and female urinary tracts and the male reproductive organs. A minimum of five years of residency is required, with the first year devoted to general surgery, three years devoted to clinical urology, and an additional year spent in either general surgery or urology. There are seven subspecialties that require additional training: pediatric urology, urologic oncology, renal transplantation, male infertility, calculi (urinary tract stones), female urology, and neurourology.

Figure A: \$130,000

Figure B: \$248,236

Entrance factor: 4

For additional information, see:

American Urological Association  
[www.auanet.org](http://www.auanet.org)

## **HOSPITAL BASED SPECIALTIES**

### **Anesthesiology**

An anesthesiologist is responsible for continued medical assessment, monitoring a patient's vital signs, and controlling the patient's pain level and consciousness before, during, and after surgical procedures. The residency training program is four years long. A subspecialty fellowship in critical care or pain management can be completed in a year.

Figure A: \$130,000

Figure B: \$265,753

Entrance factor: 1

For additional information, see:

American Society for Anesthesiology  
[www.asahq.org](http://www.asahq.org)

### **Emergency Medicine**

The specialty of emergency medicine is devoted to the initial evaluation, resuscitation, and stabilization of patients who come to the emergency room. Since emergency rooms are open 24 hours a day, an emergency physicians must be willing to work some nights and weekends although this often allows for a flexible schedule. The residency is three to four years in length.

Figure A: \$170,000

Figure B: \$197,000

Entrance factor: 5

For additional information, see:

The Society for Academic Emergency Medicine  
[www.saem.org](http://www.saem.org)  
American College of Emergency Physicians  
[www.acep.org](http://www.acep.org)  
American Academy of Emergency Medicine Online  
[www.aaem.org](http://www.aaem.org)

### Hospitalist

The term hospitalist was coined during the past decade. These doctors strictly focus on inpatient care and most work for hospitals to take care of other doctors' patients. The hospitalist is a very new field and is continuing to grow. Some hospitalists have family practice or pediatric residency training backgrounds while many more have internal medicine backgrounds. According to the Medical Group Management Association at <[www.cejka.com/news/surveys/](http://www.cejka.com/news/surveys/)>, in 1997, the starting salary for a hospitalist was \$123,700 and the median salary was \$139,000.

Entrance factor: Not available

For additional information, see:

National Association of Inpatient Physicians

[www.naiponline.org](http://www.naiponline.org)

American College of Physicians - American Society of Internal Medicine

[www.asim.org](http://www.asim.org)

## **PREVENTIVE MEDICINE SPECIALTIES**

### **Aerospace Medicine**

Aerospace medicine is a specialty of preventive care. These doctors are responsible for the medical care and safety of people involved in aviation and space travel. Medically certifying pilots is a large part of their duties. Aerospace medicine requires a one year internship followed by two years of residency or a combined four year residency in aerospace medicine and internal medicine. Only four programs exist in the United States with only 40 spots available each year. Two of the programs are through the U.S. military and require their doctors to be flight surgeons before entering their programs. Salary information is not available.

Entrance factor: 3

For additional information, see:

Aerospace Medical Association  
[www.asma.org](http://www.asma.org)

### **Occupational and Environmental Medicine**

Occupational and environmental physicians work to prevent and treat occupational hazards, diseases and injuries of workers and of people in the environment. They strive to improve employee health through clinical care, education, and counseling programs. Residency consists of two to three years following a general internship year. According to SHR's Medquest Tablet at <[www.shrmedquest.com](http://www.shrmedquest.com)>, the 1999 median salary for occupational and environmental physicians is \$154,737.

Entrance factor: 2

For additional information, see:

American College of Occupational and Environmental Medicine  
[www.acoem.org](http://www.acoem.org)  
American College of Physicians - American Society of Internal Medicine  
[www.asim.org](http://www.asim.org)

### Tropical Medicine and Hygiene

This specialty focuses on the prevention and control of tropical diseases, including parasitic, viral, enteric, and mycobacterial infections. Opportunities for employment include working in travel medicine clinics, consultative practices, and branches of the federal government such as the Centers for Disease Control, the National Institutes for Health, or the military. Experience in tropical medicine is gained from either clinical experience in tropical areas, schools of public health, or laboratories of the federal government. Salary information is not available.

Entrance factor: Not available

For additional information, see:

The American Society of Tropical Medicine and Hygiene

[www.astmh.org](http://www.astmh.org)

American College of Physicians - American Society of Internal Medicine

[www.asim.org](http://www.asim.org)

## **MISCELLANEOUS SPECIALTIES**

### **Bariatrics**

A bariatrician is a physician that deals with the medical treatment of people who are overweight or obese. They work with these patients by developing a plan for diet and nutrition, exercise, lifestyle changes, and if necessary the prescription of medications including appetite suppressors or surgery. They also provide periodic follow-up and counseling. Residency consists of an internship year followed by two years of training in bariatric medicine. After the transitional internship year, some physicians pursue a general surgery residency first before they continue with their two years of bariatric training in order to perform bariatric surgery. Salary information is not available.

Entrance factor: Not available

For additional information, see:

American Society of Bariatric Physicians  
[www.asbp.org](http://www.asbp.org)  
Academy of Bariatric Surgeons  
[www.obesityhelp.com](http://www.obesityhelp.com)

### **Dermatology**

Dermatologists deal with the diagnosis and treatment of disorders of the skin, mouth, hair, nails, and external genitalia (sexually transmitted diseases). An internship year is followed by three more years of training in dermatology.

Figure A: \$150,000

Figure B: \$199,028

Entrance factor: 5

For additional information, see:

American Academy of Dermatology  
[www.aad.org](http://www.aad.org)

## Pathology

A pathologist is a doctor who examines tissue and interprets tests. Since there are now over 2000 tests that can be performed on blood and body fluid, a pathologist is the expert that many doctors go to for help in understanding and interpreting these tests. They are also responsible for performing autopsies and provide immediate diagnoses on biopsies during surgery. Many pathologists also teach at medical schools. The residency for pathology is four to five years with possible fellowships afterward for subspecialties such as forensics. The average salary for practicing pathologists is \$175,000 according to the average of ten salary surveys conducted by numerous organizations at <[www.physicianssearch.com/physician/salary.html](http://www.physicianssearch.com/physician/salary.html)>.

Entrance factor: 1

For additional information, see:

American Society of Clinical Pathologists  
[www.ascp.org](http://www.ascp.org)  
College of American Pathologists  
[www.cap.org](http://www.cap.org)

## Physical Medicine and Rehabilitation

Doctors who work in physical medicine and rehabilitation are sometimes referred to as "quality of life" specialists. They help patients that have acute or chronic medical conditions, musculoskeletal conditions, and severe disabilities. Their goals are to use preventive and nonsurgical treatments to restore or maximize function. The residency is four years in length. The average salary is \$120,000 according to <[www.physicianssearch.com/physician/salary.html](http://www.physicianssearch.com/physician/salary.html)>.

Entrance factor: 1

For additional information, see:

American Academy of Physical Medicine and Rehabilitation  
[www.aapmr.org](http://www.aapmr.org)

## **NON-CLINICAL BASED MEDICAL SPECIALTIES**

### **Clinical Decision Making/Medical Administration**

Physicians that work in clinical decision making or medical administration are not clinicians. They come from many different backgrounds and work as administrators in a health department, corporate or university health centers or are managing a health maintenance organization or community-based clinic. These physicians focus on controlling costs, evaluating programs, making policies, and on quality assurance. These physicians have completed residencies in another field and then some have received additional training such as a Master of Public Health. Salaries are highly variable.

Entrance factor: 1

For additional information, see:

American College of Physician Executives  
[www.acpe.org](http://www.acpe.org)

### **Clinical Pharmacology and Therapeutics**

The specialty of clinical pharmacology and therapeutics deals with the efficacy and safety of current drugs, the development of new and improved drugs, and the optimal clinical use of drugs. Physicians in this specialty often take jobs in academic medicine, industry or drug regulation such as with the Food and Drug Administration. These doctors first complete a residency in internal medicine and then complete a two to three year fellowship in clinical pharmacology. Salary information is not available.

Entrance factor: Not available

For additional information, see:

American College of Physicians - American Society of Internal Medicine  
[www.asi.org](http://www.asi.org)



## Medical Informatics

In this new age of technology, society needs people who are knowledgeable about both the clinical and technological aspects of medicine. These people are called medical informatics specialists. The website <[www.asim.org/srf/scp.htm](http://www.asim.org/srf/scp.htm)> offers an explanation of this unique branch of medicine.

Medical informatics focuses on the study, invention, and implementation of structures and algorithms to improve communication, understanding, and management of medical information. Drawing on the disciplines of computer and information science, engineering, and mathematics, informatics specialties include artificial intelligence, biostatistics and epidemiology, database methods, decision making, imaging, instrumentation, man-machine interface, networking, signal processing, simulation and modeling, and systems development.

These doctors first complete a clinical residency and then either get further training through a formal doctoral program or through postdoctoral research fellowships. Salary information is not available.

Entrance factor: 1

For additional information, see:

American Medical Informatics Association

[www.amia.org](http://www.amia.org)

American College of Physicians - American Society of Internal Medicine

[www.asim.org](http://www.asim.org)

Although salary information has been included on most specialties, this should not be a deciding factor about what type of medicine to enter. It is important to pick a specialty where a desire to read and learn about the newest developments is present. Most doctors spend about five to seven hours a week reading journals or continuing their education in some way, according to the hematologist/oncologist interviewed.

Residents and fellows are paid a much reduced salary from a first year doctor's salary. Most salaries for residencies range from \$25,000 to \$45,000. Many other benefits, however, are being offered to doctors entering their respective fields. Most employers are paying relocation fees, continuing education fees, malpractice insurance, disability, retirement, and health insurance. Some are also giving signing bonuses to recruit physicians to come to their area.

## **Part Three**

### **Other Factors to Consider Before Entering Medicine**

The hours that doctors work in any field of medicine are extremely long and they usually have to take call at night and on weekends. One question posed to the doctors interviewed was whether they felt that their career was conducive to having a family. Out of the seven doctors that were interviewed, one was not married, two were married without children, and the remaining four had children. The orthopedic surgeon said that he thought he currently balances the two pretty well, but that most of the time his wife and kids feel like they come second. He also felt that it would be much tougher for a female physician. The radiologist felt that he was able to balance work and family pretty well, however, his wife had assumed the main responsibility with the children. The pediatrician had children while in residency and, therefore, had two small children when she was just starting her solo practice. She said this was extremely difficult especially since her husband was a surgeon and had a worse schedule than she did. She felt like raising children and being a doctor was difficult but that she was able to do a good job. If planning to have children, it is crucial to get reliable child care and is often necessary to delegate other tasks such as hiring someone to clean the house. The neurologist was married but did not have children. He felt he is able to balance his family life with his career so far. The family practice doctor was not married but he felt like all of his colleagues were able to balance their lives. He felt like practices are more accommodating today than they have been in the past. The female psychiatrist was married with no children, but felt psychiatry is a field that is more conducive to a family life because of the stability of office hours. Finally, the hematologist/ oncologist was an older gentleman who has raised five kids. He said that such a hectic career can be disruptive to family life, especially at first. However, he felt today physicians are making their families more of a priority and that they are trying to maintain interests outside medicine. Especially as the number of female physicians rises, it seems that the medical community is more frequently willing to

accommodate people who want to spend more time with their families. In conclusion, it is possible to be a good parent and spouse while being a doctor, but it will be challenging.

For women, if deciding to have children, the timing should be considered. There is a general agreement that the most inconvenient time to have a child is during the first year of residency followed closely by the third year of medical school. If having children during residency is important, look for a large program that might have more flexibility to modify schedules. Do not let the balancing of family and career be the deciding factor when contemplating a career in medicine.

Another major issue to consider is the state of our current health care system. One question posed to all the doctors that were interviewed was about how they think managed care is currently affecting their practice or how it will in the future. Overall, there was a very negative reaction to managed care. One doctor growled and said it was almost 100% evil. The psychiatrist said that it helps make people responsible which is a good idea and that it also helps her focus on asking certain questions that she knows her patient's health insurance, HMO or PPO will ask. However, she and other doctors find it really frustrating and irritating to have to explain to these managed care institutions why one of their patients need a certain treatment or admitted into the hospital when the managed care workers do not have a clinical background themselves. If a company switches plans or if a patient switches jobs, managed care can disrupt the patient - doctor relationship if their plan no longer covers that particular doctor. This patient - doctor relationship is particularly important in psychiatry. Other physicians said that they cannot always give the care that they think is most appropriate. The pediatrician agreed and further stated that she has to take more time and energy out of her day to get on the phone with these companies to fight for her patients' rights. Another doctor talked about how managed care is not bad for healthy individuals. If they get sick or injured, however, problems arise. The hematologist/oncologist claimed that the biggest problem with managed care is that patients do not understand what is available to them.

They fear that they will not have the appropriate access to the doctors they need. Their fears have not been unfounded. None of the doctors had many positive things to say about managed care and most just thought it added another layer of bureaucracy. It is hard to predict exactly where our health care system is headed. Some doctors feel that there will be patient backlash and are hopeful that things will eventually improve. There will probably always be concerns about the health care system in the United States, but it cannot take away from the fact that medicine is one of the most rewarding and revered careers that one could ever enter.

### Other Good Sources of Information

#### Websites:

American Medical Association

[www.ama-assn.org](http://www.ama-assn.org)

The National Medical Association

[www.natmed.org](http://www.natmed.org)

Salary Information

[www.physicianssearch.com](http://www.physicianssearch.com)

[www.practic-net.com/surveys.report.html](http://www.practic-net.com/surveys.report.html)

#### Book:

Iserson, K.V. (1997). Get into medical school! A guide for the perplexed (5th ed.).

Tucson, AZ: Galen Press, Ltd..

## A Summary of Medical Specialties and Subspecialties

Many specialties and subspecialties can be classified under more than one category.

### Primary Care Specialties

#### Family Practice

- Geriatric Medicine

- Sports Medicine

#### Internal Medicine

- Adolescent Medicine

- Cardiology

  - Clinical Cardiac Electrophysiology

  - Pediatric Cardiology

  - Nuclear Cardiology

  - Cardiac Catheterization

- Clinical and Laboratory Immunology

- Critical Care Medicine

- Endocrinology

- Gastroenterology

- Geriatric Medicine

- Hematology

- Infectious Disease Medicine

- Medical Oncology

- Nephrology

- Neurology

  - Electrophysiology

  - Neurooncology

  - Movement Disorders

  - Degenerative Diseases

- Pulmonary Medicine

- Rheumatology

- Sports Medicine

### Pediatrics

- Adolescent Medicine

- Behavioral Pediatrics

- Clinical and Laboratory Immunology

- Developmental Disabilities

- Genetics

- Medical Toxicology

- Neonatal-Perinatal Medicine

- Pediatric Cardiology

- Pediatric Critical Care

- Pediatric Emergency Medicine

- Pediatric Endocrinology

- Pediatric Hematology/Oncology

- Pediatric Infectious Disease Medicine

- Pediatric Nephrology

- Pediatric Pulmonology

- Sports Medicine

## Primary Care Surgical Specialties

### Obstetrics and Gynecology

- Critical Care Medicine
- Gynecologic Oncology
- Maternal and Fetal Medicine
- Reproductive Endocrinology

### Ophthalmology

- Cornea Ophthalmology
- Glaucoma Ophthalmology
- Neuro-ophthalmology
- Pediatric Ophthalmology
- Retina-Vitreous Ophthalmology

### Otolaryngology

- Allergy Otolaryngology
- Facial Plastic and Reconstructive Surgery
- Head and Neck
- Laryngology
- Neurotology
- Otology
- Pediatric Otolaryngology
- Rhinology

## Surgical Specialties

### Bariatric Surgery

### Cardiovascular Surgery

### Colon and Rectal Surgery

### General Surgery

- General Vascular Surgery
- Pediatric Surgery
- Surgery Critical Care

### Neurosurgery

- Cerebrovascular Surgery
- Critical Care
- Spine Disorders
- Neurotrauma
- Peripheral Nerves
- Stereotactic and Functional Neurosurgery
- Tumors

### Orthopedic Surgery

- Ankle Surgery
- Back Surgery
- Elbow Surgery
- Hand Surgery
- Hip Surgery
- Knee Surgery
- Shoulder Surgery
- Sports Medicine
- Total Joint Replacements



## Plastic Surgery

- Cosmetic Surgery
- Hand Surgery
- Reconstructive Surgery

## Surgical Oncology

## Thoracic Surgery

## Urology

- Calculi
- Female Urology
- Male Infertility
- Neurourology
- Pediatric Urology
- Renal Transplantation
- Urologic Oncology

## Hospital Based Specialties

### Anesthesiology

- Critical Care Medicine
- Pain Management

### Emergency Medicine

- Medical Toxicology
- Pediatric Emergency Medicine
- Sports Medicine

### Hospitalist

## Preventive Medicine Specialties

### Aerospace Medicine

### Occupational and Environmental Medicine

### Public Health and General Preventive Medicine

### Medical Toxicology

### Underseas Medicine

## Miscellaneous Specialties

### Bariatrics

### Dermatology

#### Dermatopathology

#### Clinical and Laboratory Dermatology Immunology

### Pathology

#### Blood Bank and Transfusion Medicine

#### Chemical Pathology

#### Cytopathology

#### Dermatopathology

#### Forensic Pathology

#### Hematology

#### Immunopathology

#### Medical Microbiology

#### Neuropathology

#### Pediatric Pathology

### Physical Medicine and Rehabilitation

#### Spinal Cord Injury Medicine

**Psychiatry**

- Addiction Psychiatry
- Child and Adolescent Psychiatry
- Clinical Neurophysiology
- Forensic Psychiatry
- Geriatric Psychiatry

**Radiology**

- Breast Imaging
- Cardiovascular Radiology
- Chest Radiology
- Computed Tomography
- Diagnostic Radiology
- Emergency Radiology
- Gastrointestinal Radiology
- Genitourinary Radiology
- Head and Neck Radiology
- Magnetic Resonance Imaging
- Musculoskeletal Radiology
- Neuroradiology
- Nuclear Radiology
- Pediatric Radiology
- Radiation Oncology
- Radiobiology
- Radiological Physics
- Ultrasound
- Vascular and Interventional Radiology

**Non-Clinical Based Medical Specialties**

- Clinical Decision Making/Medical Administration
- Clinical Pharmacology and Therapeutics
- Medical Genetics
- Medical Informatics

## The Handbook for Students Contemplating a Career in Medicine: A Guide to Choosing a Medical Specialty

An Honor's Thesis (Honors 499)

by

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Thesis Advisor

Nancy Behforouz

Ball State University  
Muncie, Indiana  
May 2000

### Additional information:

Field of medicine	Main areas of treatment	Average salary (first year)	Average salary (3+ years experience)	Additional information
Aerospace Medicine	Medical care of pilots in aviation and space travel	not available	not available	Aerospace Medical Association
Anesthesiology	Pain and surgical care	\$130,000	\$265,753	American Society for Anesthesiology
Bariatrics	Overweight and obese people	not available	not available	American Society of Bariatric Physicians, Academy of Bariatric Surgeons
Cardiology	Non-surgical treatment of the heart and blood vessels	\$180,000	\$283,298	American College of Cardiology
Cardiovascular Surgery	Surgical treatment of the heart and blood vessels	\$208,000	\$558,719	American College of Cardiology
Clinical Decision Making/ Medical administration	Administration	not available	not available	American College of Physician Executives, American College of Physicians-American Society of Internal Medicine, American College of Preventive Medicine
Clinical Pharmacology & Therapeutics	Drugs	not available	not available	American College of Physicians-American Society of Internal Medicine
Colon/Rectal Surgery	Colon, rectum, and anus	\$155,000	\$264,000	The American Society of Colon and Rectal Surgeons
Critical Care	Long term care of life threatening illnesses or injuries	not available	not available	Society of Critical Care Medicine
Dermatology	Skin, mouth, hair, nails, and external genitalia	\$150,000	\$199,028	American Academy of Dermatology
Endocrinology	Hormones	\$140,000	\$160,085	The Endocrine Society, American Association of Clinical Endocrinologists
Emergency Medicine	Initial evaluation, resuscitation, and stabilization of patients	\$170,000	\$197,000	The Society for Academic Emergency Medicine, American College of Emergency Physicians, American Academy of Emergency Medicine Online
Family Practice	Primary care of family	\$125,000	\$142,516	American Academy of Family Physicians
Gastroenterology	Digestive system	\$140,000	\$250,574	American College of Gastroenterology
General Surgery	Surgical procedures, usually to abdominal organs	\$150,000	\$261,276	American College of Surgeons
Geriatrics	Primary care of older patients	not available	not available	The American Geriatrics Society
Hematology/Oncology	Blood and cancer	\$150,000	\$249,298	American Society of Clinical Oncology, American Society of Hematology
Hospitalist	Inpatient care	\$123,700	\$139,000	National Association of Inpatient Physicians, American College of Physicians-American Society of Internal Medicine
Infectious Disease Medicine	Communicable diseases	not available	not available	Infectious Disease Society of America, American College of Physicians-American Society of Internal Medicine
Internal Medicine	Primary care of adults	\$115,000	\$148,206	American College of Physicians-American Society of Internal Medicine, Society of General Internal Medicine

Medical Informatics	Technology of medicine	not available	not available	American Medical Informatics Association, American College of Physicians-American Society of Internal Medicine
Nephrology	Kidney	\$129,000	\$233,824	American Society of Nephrology, American College of Physicians-American Society of Internal Medicine
Neurology	Non-surgical treatment of brain and nervous system	\$130,000	\$186,653	American Academy of Neurology
Neurosurgery	Surgical treatment of brain and nervous system	\$175,000	\$438,426	Neurosurgery/On Call
Obstetrics and Gynecology	Female reproductive tract and pregnancy	\$150,000	\$238,224	American College of Obstetricians and Gynecologists
Occupational and Environmental Medicine	Employee health	not available	not available	American College of Physicians-American Society of Internal Medicine, American College of Occupational and Environmental Medicine
Ophthalmology	Eye	\$130,000	\$246,823	American Academy of Ophthalmology
Orthopedic Surgery	Surgical treatment of musculoskeletal system	\$180,000	\$346,224	American Society of Orthopedic Surgeons
Otolaryngology	Ears, nose, and throat	\$130,000	\$254,978	American Academy of Otolaryngology-Head and Neck Surgeons
Pathology	Examine tissue and interpret tests	not available	\$175,000	American Society of Clinical Pathologists, College of American Pathologists
Pediatrics	Primary care for children	\$110,000	\$143,754	American Academy of Pediatrics
Physical Medicine and Rehabilitation	Restore or maximize function of disabled patients	not available	\$120,000	American Academy of Physical Medicine and Rehabilitation
Plastic Surgery	Cosmetic and reconstructive surgery	\$150,000	\$266,047	Plastic Surgery Information Service
Psychiatry	The mind	\$125,000	\$142,610	American Psychiatric Association Online, American Academy of Child and Adolescent Psychiatry
Pulmonary Medicine	Respiratory system	\$110,000	\$188,956	American College of Chest Physicians, American Thoracic Society, American College of Physicians-American Society of Internal Medicine
Radiology	Images of the human body	\$145,000	\$286,361	Radiological Society of North America, Inc. Link Radiology Info
Rheumatology	Arthritis, autoimmune diseases, and other diseases of joints, muscles and bones	\$110,000	\$155,164	American College of Rheumatology
Sports Medicine	Acute and chronic injury in active patients	not available	not available	American College of Physicians-American Society of Internal Medicine, American College of Sports Medicine, American Orthopedic Society for Sports Medicine
Tropical Medicine and Hygiene	Tropical diseases and infections	not available	not available	The American Society of Tropical Medicine and Hygiene, American College of Physicians-American Society of Internal Medicine
Urology	Male and female urinary tract, male reproductive organs	\$130,000	\$248,236	American Urological Association